31. A method according to claim 1, wherein a layer having a layer weight for the precipitated and dried phosphate layer in the range from 0.1 to 5 g/m^2 is formed with the phosphating solution.

32. A method according to claim 1, wherein the phosphating solution is applied to the metal part by spraying, by roller application, by flooding and sub sequent squeezing off, by splashing and subsequent squeezing off or by dipping and subsequent squeezing off.

33. A method according to claim 1, wherein the liquid film formed on the metal part with the phosphating solution is dried on the surface of the metal part at temperatures in the range from 20 to 120°C with respect to PMT temperatures.

34. A method according to claim 1, wherein a phosphate layer having the following composition is formed:

free or substantially free of nickel or up to a content of 10% by weight nickel;

5 to 40% by weight Zn,

1.5 to 14% by weight Mn, and

20 to 70% by weight phosphate, calculated as P_2O_5.

35. A method according to claim 1, wherein after drying a first phosphating solution wherein the metal parts are wetted with a second aqueous, acidic phosphating solution, this second solution being free or substantially free of nickel, or containing up to 20 g/l of nickel ions in the phosphating solution and 0 to 20 g/l of zinc ions, 0 to 5 g/l of manganese ions, and 5 to 50 g/l of phosphate ions, calculated as P_2O_5.

36. A method according to claim 1 wherein before wetting with the first and/or second phosphating solution, the metal parts are wetted with an activating solution or activating suspension.

37. A method according to claim 1 wherein the first phosphating solution contains at least 0.3 mg/l of copper ions, and the second phosphating solution which is possible used contains 0.1 to 50 mg/l of copper ions.

38. A method according to claim 1 wherein a first and/or second phosphating solution is used in which the A-value, as ratio of the free acid to the total content of the phosphate ions, lies in the range from 0.03 to 0.6.

39. A method according to claim 1 wherein the first and/or second phosphating solution contains at least one catalyst such as, for example, a peroxide, a substance based on nitroguinidine, based on nitrobenzene sulphonic acid or based on hydroxyalamine, a chlorate, a nitrate, a perborate or an organic nitro compound, such as p-nitrotoluene sulphonic acid.

40. A method according to claim 1 wherein the first and/or second phosphating solution contains a peroxide admixture, preferably H_2O_2 in a concentration in the range from 1 to 100 g/l, calculated as H_2O_2.

41. A method according to claim 1 wherein the first and/or second phosphating solution has a content of at least one compound based on perboric acid, lactic acid, tartaric acid, citric acid and/or a chemically related hydroxy carboxylic aid.

42. A method according to claim 1 wherein the first and/or second phosphating solution has a content of ions of aluminum, boron, iron, hafnium, molybdenum, silicon, titanium,

zirconium, fluoride and/or complex fluoride, in particular 0.01 to 5 g/l of fluoride in free and/or bound form.

43. A method according to claim 1 wherein the first and/or second phosphating solution is applied at a temperature in the range from 10 to 80°C.

44. A method according to claim 1, wherein a passivating solution is applied directly to a phosphate layer, in particular by spraying, dipping or rolling.

45. A method according to claim 1, wherein the first and/or second phosphate layer which has died on to the metal part is wetted with an oil, a dispersion or a suspension, in particular a deforming oil or anticorrosive oil and/or a lubricant.

46. A method according to claim 1, wherein an oil coating or lubricant coating which is possibly present is removed from or out of the first or second phosphate layer respectively.

47. A method according to claim 1, wherein the metal parts which have been provided with a first and/or second phosphate layer are coated with a lacquer paint, with another type of organic coating and/or with a layer of adhesive, and possibly deformed, in which case the metal parts which have been coated in this way can additionally be glued, welded, and/or connected in another way to other metal parts.

48. A method according to claim 23, wherein the metal parts which have been provided with a first and/or second applied phosphate layer are coated with a coating corresponding to claim 23 either before or not until after the deformation and/or assembly.